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ABSTRACT

The major purpose of the survey was to follow up the employed hearing-impaired vocationally trained graduates (high school) in Pennsylvania from 1970-1975 to determine (1) their views toward educational and guidance programs, (2) their views regarding relatedness of jobs held to training, (3) employers' views toward the graduates, and (4) parents' views toward the graduates' educational programs. Six trained interviewers conducted interviews with graduates, their parents, and their employers. Seven basic instruments were also developed for the survey procedure. Some of the major conclusions were (1) the majority of graduates felt they had received enough information from available guidance services for selecting vocational programs, (2) many graduates responsed that they did not receive enough help from their school in finding a job, (3) about half the graduates reported their present job completely unrelated to their high school training, (4) in general, employers felt the graduates were adequately trained for entry level work skills and few needed job station changes for their handicap, and (5) many parents liked the educational programs but expressed the need for more language development, on-the-job training, educational counseling, followup services, practical living skills, and educational programs closer to home. This summary covers the study's objectives, procedures, results, conclusions, and recommendations with major emphasis on discussion of the results. Fourteen tables of statistical data supplement the text. (SH)

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Summary, 1970-75 Follow-up of Hearing Impaired Graduates in Pennsylvania

(Project No. 19-5812)

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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PREFACE

This abbreviated publication of the "1970-75 Follow-Up of the Hearing Impaired" study present objectives, procedures, results, conclusions and recommendations. The complete report is available from the Research Coordinating Unit in the Pennsylvania Department of Education or from the Vocational Education Information Network at Millersville State College in microfiche form upon request.

The purpose of this study was to examine selected aspects of the educational and guidance programs, work adjustments and present status of the hearing-impaired graduates and the views of the employers and parents toward the training of the graduates. Bloomsburg State College managed the project in cooperation with a consortium from the PDE and public and private training institutions for the hearing-impaired.

The findings indicate a need for appropriate vocational training programs for the hearing-impaired. A note of caution should be indicated. Many programs for the hearing-impaired, especially those in the intermediate units, have been in existence for a relatively short time. In fact, many of these programs are at the elementary school level and are beginning to feel the need for secondary programs. Therefore, this is a very opportune time to begin to plan appropriate vocational programs for the hearing-impaired.

It is hoped that the findings and conclusions will orient you in your efforts to develop programs and services for the hearing-impaired. Further, the detailed final report can provide a model for evaluating your efforts in preparing the hearing-impaired for the world of work.

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SUMMARY

The purpose of this study was to examine selected aspects of the educational and guidance programs, work adjustments and present status of the hearing-impaired graduates and the views of the employers and parents toward the training of the graduates.

The major conclusions derived from this study were:

1. The majority of graduates felt they had received enough information from the available guidance services for selecting vocational programs.

2. There was a positive increase from 1970 to 75 in the graduates' views toward the adequacy of their vocational training for the job market demands.

3. Many of the graduates responded that they did not receive enough help from their school in finding a job.

4. About half of the graduates reported their present jobs were completely unrelated to their high school training.

5. A majority of the graduates were employed full-time and were self-supporting.

6. Over three-fourths of the graduates' jobs were equally distributed among machine, trades, services, clerical and sales occupations.

7. Hearing-impaired workers as a group are significantly better adjusted and satisfied with their job than "regular" office clerks.

8. In general, the employer felt the graduates were adequately trained for entry level work skills and few needed job station changes for their handicap.

9. The graduates are making advancements in skill and salary; however they are not advancing in job classification.

10. Hearing-impaired workers were rated by their employers as being equally successful at their job as hearing workers.

11. Ninety-five per cent of the employers of the hearing-impaired reported that they would consider hiring another hearing-impaired worker.

12. Many parents liked the educational programs but expressed need for more language development, on-the-job training, educational counseling, follow-up services, flexible programs, practical living skills and educational programs closer to home.

13. Many parents claimed that their sons/daughters are self-supportive; however, they felt that the vocational training was not adequate for today's job market needs. Reasons cited were lack of opportunity for advancement, job skills confined to a too limited speciality area, not enough jobs available in the field trained for, incomplete counseling and the inablility to keep up with rapidly advancing technology.

The recommendations for this study are:

1. A school-based job placement service should be made available to all vocational graduates.

2. The training institutions should look closer at the present and future job market. In addition, an updated occupation task analysis should be conducted for each program area.

3. More programs should be developed on the secondary and postsecondary levels to help the hearing-impaired gain additional job skills for advancement in their chosen field and for entry level jobs in the technical and professional fields.

4. Local employer follow-up should be conducted to gather information on work skills, interpersonal relationships, attendance, attitudes, basic communication and math skills.

5. Lifelong learning centers for the hearing-impaired should be established. Hearing-impaired adults have a need for vocational counseling, job placement assistance, interpreters, tutoring, training in communication skills and continued vocational training to provide opportunities for advancement and upgrading of job skills. The center's services should also be available to the parents of deaf children.

BACKGROUND

The Pennsylvania Department of Education conducts follow-up surveys of regular and special education graduates in Pennsylvania through a system called Vocational Education Management Information System. However, the VEMIS data have certain limitations which preclude detailed analysis. For example, the VEMIS system places all special education graduates into one category, making it impossible to study individual subgroups, such as the hearing-impaired, visually-impaired, learning-disabled, etc. Also, the low reading levels of the special education graduates make it difficult to use a self-completion questionnaire. It seems that face-to-face interviews are the only way to collect reliable data from special education graduates.

Each year the vocational department of the Pennsylvania School for the Deaf conducts face-to-face interviews with employed graduates. The results of these interviews are used to evaluate progress and to plan for future programs. The Pennsylvania Department of Education's Research Coordinating Unit for Vocational Education in the Bureau of Information Systems felt that, since the follow-up efforts of the PSD seem to be successful in improving the employment potential of the hearing-impaired student, an expansion of the follow-up should be developed to include all employed hearing-impaired graduates in Pennsylvania.

In September 1975 the Pennsylvania Research Coordinating Unit awarded Gerald Powers, professor in Bloomsburg State College's Department of Communication Disorders, a Part C research grant totaling $28,080. The grant was for a

1970-75 follow-up of hearing-impaired graduates in Pennsylvania (project number 19-5812). The purpose was to gather information on graduates, their parents and employers in order to help evaluate the vocational curriculum and to plan for future programs. Bloomsburg State College managed the project in cooperation with the Pennsylvania Research Coordinating Unit for Vocational Education and public and private training institutions of the deaf.

Review of Literature

There has not been a particularly large amount of research done on the employment success of the hearing-impaired. What studies are available have been confined to surveys of various samples of deaf workers. The first large-scale survey of employed deaf was conducted by Lande and Begman (1957). Regional surveys were conducted by Boatner, Stuckless and Moores (1964) in New England and Kronenberg and Blase (1966) in the South West. However, the bulk of the surveys has been follow-ups of the graduates of schools for the deaf: Central Institute (Hirsch, 1952); Kansas School (Mog, 1954); Clarke School (Bruce, 1960); New York City Public School (Justman and Moskowitz, 1963) and the Pennsylvania School for the Deaf (1972, 1973 and 1974). The major findings reported in all of these surveys have been categorized by Guilfoyle (1973) into the following six aspects of vocational adjustments: (1) occupational distribution of deaf workers; (2) levels of earnings; (3) stability of employment; (4) job satisfaction; (5) relation of training to present occupation and (6) communications used at work.

Objectives

The major purpose of this study was to follow-up the employed hearing-impaired graduates in Pennsylvania from 1970-75. Specifically, this study provided information for the following research questions about the hearing-impaired graduate:

1. What are the graduates' views toward the educational program?
2. What are the graduates' views toward the guidance program?
3. What are the graduates' views regarding relatedness of jobs held to training?
4. What is the present status of the graduates?
5. What are the employers' views toward the graduates?
6. What are the parents' views toward their sons'/daughters' educational programs?

METHODS AND PROCEDURES

Population

The population for this study was normal, hearing-impaired young adults who were residents of Pennsylvania and graduates from Pennsylvania educational institutions from 1970 to 1975 who met the following criteria: (1) no diagnosed organic impairment other than deafness; (2) IQ scores of 70 or above on standardized intelligence tests; (3) no diagnosed psychosis; and (4) a decibel loss of 40 to 55 for the speech range in the better ear.

Initial referrals for the study were obtained from intermediate units, residential schools and private institutions for the hearing-impaired in Pennsylvania. Each educational institution was contacted by mail for its participation and assistance on the project. The educational agencies were requested to obtain permission from graduates and parents to be interviewed by the project interviewers.

Table 1 presents the number of referrals for the study. It should be noted that 163 referrals were received too late to be included in the sample. The majority of persons referred attended residential schools for the deaf. An apparent explanation for this is that residential schools have been established for a longer period, whereas intermediate units are relatively new educational systems.

TABLE 1

SOURCE OF REFERRALS

Source	No.	Per Cent
Pennsylvania School for the Deaf	170	28
Western Pennsylvania School for the Deaf	150	25
Pennsylvania State Oral School for the Deaf	145	24
Intermediate Units	75	13
Private Schools and Community	60	10
TOTAL	600	100

Sampling Procedures

Six interviewers were selected to conduct the survey, each given a list of referrals according to specific geographic areas. They were instructed to contact every referral by mail, telephone or face to face to arrange an interview. The names of the graduates who were successfully interviewed were given to the referral agent for the purpose of obtaining more information about the graduates' educational history. Parents and employers of the graduate were also interviewed. The time period for the interviewing was from November 15, 1975 to March 15, 1976. Table 2 presents the status of the actual sample.

TABLE 2

SAMPLE STATUS

Status	No.	Per Cent
Interviewed	167	38
Unable to locate	58	14
Deceased	0	0
Located but no response	138	32
Located but refused	37	8
Out-of-State	37	8
TOTAL	437	100

Table 3 shows the number of graduates, parents and employers who completed the survey forms.

TABLE 3

SAMPLE OF GRADUATES, PARENTS AND EMPLOYERS COMPLETING THE SURVEY FORMS

Form	Number
Educational History Form	167
Graduate Questionnaire	167
Powers Communication Scale	167
Minnesota Satisfactoriness Scale	65
Employer Survey	92
Minnesota Satisfaction Questionnaire	127
Parent Follow-Up Survey	153

Selection and Training of Interviewers

The interviewers were selected on the basis of their ability to communicate with the hearing-impaired, geographic location and experience in the field of hearing impairment.

A one-day training workshop was conducted to explain the use of each survey instrument. Each instrument was reviewed item by item with comments and hypothetical situations to promote a thorough understanding of each survey instrument. Each interviewer was instructed to contact every graduate on the list within his/her geographic area. Due to budget and time constraints, the interviewers were instructed to attempt only one appointment with the graduate. The interviewers were instructed not to spend time making additional appointments with graduates who cancel out, make no response, have wrong address or refuse.

Instruments

The development of the instruments which were used in this study was decided upon by a group composed of staff from residential schools for the deaf, intermediate units, teacher training institutions and the Pennsylvania Department of Education. Five basic instruments were developed for the survey procedure. In addition, the MSQ and MSS were used to measure the graduates' job satisfaction.

Educational History Form. Powers, Gerald and Lewis, James (1975). This instrument was designed to be completed by the referring educational institution. Items include a description of programs, number of years enrolled in programs, degree of hearing loss, IQ achievement levels and methods of communication used by the graduate.

Graduate Questionnaire. Lewis, James; DePaolo, Ann and Andreas, Lee (1975). The purpose of the instrument was to collect data on the personal history and occupational status of the hearing-impaired graduate. Specific aspects deal with marital status, parent's hearing status, spouse and children's hearing status, personal relationship with parents, social relationship (clubs, friends), educational and vocational information, employment and occupation.

Employer Survey. Pennsylvania School for the Deaf (1974). This form was designed to be completed by an employer of a hearing-impaired worker. Items pertain to the training of the hearing-impaired employe, relationship between hearing loss and adjustment and success on the job.

Parent Follow-Up Survey. Lewis, James and Sampsell, Donna (1975). This instrument includes the parents' age, hearing status, education, occupation and income. Other items were on the parents' impression of their son's/daughter's degree of hearing loss, age of onset and methods of reciprocal communication. In addition, items were designed to determine parents' attitudes toward the educational programs and especially vocational education.

Powers Communication Scale. Powers, Gerald (1975). The communication modes in this scale are manual communication, speech reading, speech, writing, hearing, gestures and total communication. A three-point rating (1-poor, 2-average, 3-good) is used.

Minnesota Satisfaction Questionnaire. Weiss, David; Dawis, R.; England, G. and Lofquist, L. (1967). This scale is a modified version of the MSQ (Short Form), developed by the Work Adjustment Project at the University of Minnesota (1967). The language of the questionnaire was simplified for use in this study. The 20-item scale measures the following factors related to job satisfaction: ability, utilization, achievement, authority, activity, advancement, company policy, creativity, independence, moral values, recognition, responsibility, security, social status, variety and working conditions. Norms are available for a variety of worker groups. A score of 75 or higher is considered a high degree of satisfaction.

Minnesota Satisfactoriness Scale. Gibson, Dennis; Weiss, David; Dawis, R. and Lofquist, L. (1970). This scale is a 28-item instrument to be completed by a worker's supervisor. The MSS is based on five scales representing different aspects of satisfactoriness: general satisfaction, performance, conformance, dependability and personal adjustment. Norms are available for a variety of worker groups. In general, scores of 75 or above indicate a highly satisfactory rating.

Personal History

Table 4 summarizes the personal history of the hearing-impaired graduates. On the bases of the most recent audiologic information, as indicated by the training institutions, 82 per cent of the graduates have profound hearing losses of 70 db or above. Almost all the graduates use manual communication and 69 per cent rely on a combination of manual communication, speech reading and gestural communication. Most of the graduates were tested with the Weschsler Adult Intelligence Scale. The range of scores were very similar to the sample reported in the Weschsler Manual. A total of 84 per cent of the graduates are single and 15 per cent are married. Sex type was about equally distributed. Vocational graduates made up about three fourths of the sample.

TABLE 4

SUMMARY OF HEARING-IMPAIRED GRADUATES' PERSONAL HISTORY

Summary of Communication Skills*

Type	%
Manual Communication	(93)
Speech Reading	(87)
Speech	(51)
Writing	(55)
Hearing	(77)
Gestures	(27)
Total Communication	(19)

*Multiple responses

Intelligence Classifications*

Range	Normal Population	Hearing Impaired
130 & above	2.3	1
120-129	7.4	10
110-119	16.5	22
90-109	49.4	53
80-89	16.2	4
70-79	6.0	4
69 & below	2.2	1

*Wechsler Adult Intelligence Scale

Extent of Hearing Loss

Level	N	%
Mild (15db-40db)	5	(3)
Moderate (40db-60db)	9	(5)
Severe (60db-70db)	11	(7)
Profound (70 and above)	137	(82)
Unknown	5	(3)
Total	167	(100)

Marital Status

Status	N	%
Married	26	(15)
Single	139	(84)
Separated	--	----
Divorced	1	(1)
Widowed	--	----
Total	166	(100)

Sex

Type	N	%
Male	83	(50)
Female	84	(50)
Total	167	(100)

Type of Educational Program

Type	N	%
Vocational	125	(75)
Academic	42	(25)
Total	167	(100)

Definitions

db (Decibel): In the field of hearing, the decibel has no absolute value, but indicates the ratio by which one level of sound is greater than another. The reference levels for hearing are most commonly established upon normal listeners.

Deaf: Refers to those whose primary handicap is a severe to profound hearing loss requiring continual classroom placement (special) and instruction in language and communication appropriate to their needs.

Hard of hearing: Refers to those people whose degree of hearing loss is mild, moderate or severe; i.e., they have useful residual hearing to assist them in their attempt to communicate. Their degree of impairment is such that they may function and progress satisfactorily in the classroom with supplemental services.

Hearing impaired: A generic term encompassing both deaf and hard of hearing.

Vocational training: Training for gainful employment; i.e., linotype operator, plumber, carpenter, typist and similar occupations.

RESULTS

The results reflect outcomes as they relate to each of the six evaluation objectives.

Evaluation Objective 1. What are the graduates' views toward the educational program?

Student Questionnaire Items 8, 9, 11 and 13 were used to answer Evaluation Objective 1.

Items 8 and 9. What did you like and dislike about your educational program?

The most frequently mentioned area liked by the graduate was vocational training. Math was also indicated as a favorite. General academics were indicated as a major dislike. Other areas of dislike were lack of modern equipment and variety in programs. Only three graduates indicated they disliked residential living.

Item 11. Do you feel you had enough information for selecting a senior high program in college or vocational education?

A total of 63 per cent felt they had enough information for selecting a senior high program in college preparation or vocational education. This information was primarily given by guidance counselors, parents and BVR counselors.

Item 13. Do you feel your vocational training in senior high was adequate for today's job market? If yes, explain why you feel training was adequate. If no, explain why it was not adequate.

Table 5 explains graduates' attitudes on how well their vocational training prepared them for today's job market. As a way to show the impact of the changing economy the graduates were divided into three "time" groups. The data shows that only 40 per cent of the 1970-71 graduates felt that their training was adequate for the job market. The majority, or 53 per cent, of the 1972-73 graduates indicated that their vocational training was adequate. The 1974-75 graduates reported the highest degree of adequacy (58%) of their vocational training. The main reasons given for the positive views about their training were: obtained related job, vocational course prepared me for a job and helped me obtain and advance in a job. The main negative views about vocational training were need more advanced training, unable to get job for which trained, took academic course and no selection of vocational training.

TABLE 5

ADEQUACY OF VOCATIONAL TRAINING

Do you feel your vocational training in senior high was adequate for today's job market?	1970-71 N	1970-71 %	1972-73 N	1972-73 %	1974-75 N	1974-75 %
YES	10	(40)	30	(53)	30	(58)
NO	15	(60)	27	(47)	22	(42)
TOTAL	25	(100)	57	(100)	52	(100)

If yes, explain why it was adequate. The following is the rank order of the most frequent reasons.

Obtained related job
Vocational course prepared for job
Helped me obtain and advance in my job
Good preparation for college

If no, explain why it was not adequate. The following is the rank order of the most frequent reasons.

Need more advanced training
Unable to get job for which trained
Took academic course
No selection of vocational training
Not informed about vocational school
Attended other school for training
Insufficient funds for equipment

Evaluation Objective 2. What are the graduates' views toward the guidance program?

Graduate Questionnaire Items 10, B-2, 3, 4, 5, 6, 10 and 17 were used to answer Evaluation Objective 2.

Item 10. Were you ever informed about the education or vocational programs available to you? If yes, who informed you?

A total of 80 per cent of the graduates responded that they had been told about the educational and vocational programs available to them. The major informants for the graduates were the school counselor, teacher, principal, Bureau of Vocational Rehabilitation counselor and hearing center staff.

Items B-2, 3, 4, 5 and 6. (Each item is related to pre-employment guidance.)

Table 6 (page 10) summarizes the responses for each of the items. Results show that 73 per cent of the graduates reported that they had talked to someone at school about what they would do after graduation. Only 29 per cent of the graduates reported they had received a list of employers who needed workers, and only 26 per cent had a job offer before they left school. Only 30 per cent reported that they obtained their job because they talked to an employer before graduation. In regard to the school helping them find a job, 52 per cent rated their school as giving "no help," whereas 24 per cent reported "very much help" was given by the school.

Item B-10. Did you have a full-time job before you left high school?

Only 32 per cent of the graduates reported they had full-time jobs to go to when they graduated.

TABLE 6

PRE-EMPLOYMENT GUIDANCE

Item	Response	N	%
B-2 Did anyone at your school take to you about what you would do after school?	Yes	116	(73)
	No	43	(27)
	Total	159	(100)
B-3 Did your school give you a list of bosses who need workers to help you find a job?	Yes	47	(29)
	No	116	(71)
	Total	163	(100)
B-4 Did any possible bosses offer you a job before you left school?	Yes	40	(26)
	No	113	(74)
	Total	153	(100)
B-5 Did you get a job because of a boss talking to you before you left school?	Yes	48	(30)
	No	112	(70)
	Total	160	(100)
B-6 Did your school give you a lot of help in finding a job?	Very much help	38	(24)
	Much help	13	(8)
	Some help	25	(16)
	No help	82	(52)
	Total	158	(100)

Item 17. How did you get your first full-time job after you left school?

The data in Table 7 reveals that the most popular method used to obtain a job was through family and parents. Twenty-eight per cent of the graduates reported that their school helped and 12 per cent obtained their job through friends. It was noted that only four per cent got their job on their own.

TABLE 7

METHODS USED TO OBTAIN JOBS

Method	N	%
Your school	34	(28)
Your vocational teacher	6	(5)
Your counselor	8	(6)
Other teachers	1	(1)
Your family, parents	44	(37)
Your friends	14	(12)
By yourself	5	(4)
Through an office at school	--	(--)
Through an office of the State	6	(5)
Private employment agency	1	(1)
Through school placement office	1	(1)
Total	120	(100)

Evaluation Objective 3. What are the graduates' views regarding relatedness of jobs held to training?

Student questionnaire Items B-8, 13, and 16 were used to answer Evaluation Objective 3.

Item B-8. Do you still want a job doing what you did in school?

A total of 71 per cent of the graduates wanted to obtain employment in their field of training. It was also reported that at the time of the survey 56 per cent of the graduates still wanted to work in the occupation for which they were trained.

Item B-13. Did your school do a good job in training you for the job you have now?

Twenty-six per cent of the graduates rated their high school training as "very good" and 40 per cent found it "good." Also, 22 per cent said the training was "not so good," and only 12 per cent considered their high school training to be "bad."

Item B-16. What was the reason for not getting a job like you were trained for in school?

Table 8 shows only 68 of the 167 graduates surveyed responding to this item. One reason for this was that 29 per cent of the graduates were attending postsecondary education programs and therefore were not employed. Of the graduates who did respond, 31 per cent reported "other" reasons for not entering the field for which trained. About 28 per cent of the graduates reported that they were unable to find a job in that field. It was noted that only six per cent of the graduates reported not wanting a job in their field of training.

TABLE 8

REASONS FOR NOT ENTERING FIELD FOR WHICH TRAINED

Reason	N	%
I did not want to do what I was trained for	4	(6)
I tried, but could not get a job in what I was trained for	19	(28)
I did not think I learned enough to get a job in what I was trained for	10	(15)
The pay was not enough	6	(9)
Too little opportunity for advancement	2	(3)
I would not be able to get a better job	—	
I did not like the working conditions	2	(3)
I got a chance for a better job	1	(1)
I was unable to work in the apprentice program	3	(5)
Other	21	(31)
Total	68	(100)

Evaluation Objective 4. What is the present status of the graduate?

Graduate Questionnaire Items A, 12, C-11, C-12, C-14, C-18 and the Minnesota Satisfaction Questionnaire were used to answer Evaluation Objective 4.

Item A. What is your present status?

Table 9 shows that 85 per cent of the 1974-75 graduates were employed full time. Sixty-seven per cent of the 1970-71 graduates reported that they were working full time, whereas 77 per cent of the 1972-73 were working full time. There was a consistent percentage for all six years in the category of "unemployment, but looking for work."

TABLE 9

PRESENT STATUS OF GRADUATES

PRESENT STATUS*	(1970-71) N	(1970-71) %	(1972-73) N	(1972-73) %	(1974-75) N	(1974-75) %
I work full time.....	18	67	41	77	46	85
I work part time.....	4	15	2	4	2	4
I do not work, but am looking for a job.....	4	15	7	13	6	11
I do not work.....	1	3	3	6	—	—
Total	27	100	53	100	54	100

Multiple Response*

Item 12. Are you now self-supportive?

Eighty per cent of the 1970-71 graduates said they were self-supportive. The majority, 63 per cent of the 1972-73 and 68 per cent of the 1974-75 graduates, were self-supportive. The main reason given for not being self-supportive was because they were attending school full time.

Item C-11. How long after you left school did you start your first full time job?

The graduates who did not have a job before they left school were asked to indicate the time period between their leaving school and obtaining their first full-time employment. In 1970-71, 23 per cent obtained jobs right away, while 46 per cent took more than 16 weeks to find employment. In later years, 1972-73 and 1974-75, 59 per cent and 66 per cent respectively found jobs right away. This data is congruent with the information in Table 5, page 9 which found higher percentages of graduates obtaining jobs in the recession years. In another comparison, the data from the 1972-73 VEMIS follow-up of vocational graduates in Pennsylvania showed that only 46 per cent of the regular vocational graduates (4,843) found jobs right away.

TABLE 10

TIME PERIOD BEFORE FULL-TIME EMPLOYMENT

Time Period	1970-71 N	1970-71 %	1972-73 N	1972-73 %	1974-75 N	1974-75 %
Right away	6	(23)	25	(60)	33	(66)
2 weeks	1	(4)	4	(10)	2	(4)
4 weeks	2	(8)	—		1	(2)
6 weeks	1	(4)	—		1	(2)
8 weeks	2	(8)	2	(5)	3	(6)
10 weeks	—		1	(2)	—	—
12 weeks	2	(8)	1	(2)	1	(2)
14 weeks	--		—		1	(2)
16 weeks	—		—			
More than 16 weeks	12	(46)	9	(21)	7	(14)
Total	26	(100)	42	(100)	50	(100)

Item C-12. How much money do you make a month before money is taken out for taxes?

Table 11 presents information on the earnings of the employed hearing-impaired graduates. There did not seem to be much difference in salary in the three time periods. Approximately 55 per cent in each period earned less than $500 a month. The 1972-73 VEMIS report of vocational graduates showed that almost half, 46 per cent, of the hearing graduates (4,236) earned less than $400 a month, while 29 per cent of the hearing-impaired earned less than $400.

TABLE 11

LEVEL OF EARNINGS

Monthly Earnings Before Taxes	1970-71 N	1970-71 %	1972-73 N	1972-73 %	1974-75 N	1974-75 %
Below $400.....	8	34.8	12	29.3	17	33.3
400-449.....	6	26.1	10	24.4	12	23.5
450-499.....			5	12.2	8	15.7
500-549.....	1	4.4	3	7.3		
550-599.....			3	7.3	4	7.8
600-649.....	2	8.7	2	4.9	2	3.9
650-699.....	3	13.0	1	2.4	1	1.9
700-749.....			2	4.9	3	5.9
750-800.....			2	4.9	1	1.9
More than 800.....	3	13.0	1	2.4	3	5.9
Total.....	23	100.0	41	100.0	51	100.0

Item C-14. What kind of job do you do?

Each graduate was asked to state his/her present employment. Jobs were categorized into the nine Dictionary of Occupational Titles. Approximately 78 per cent of the graduates' jobs were equally distributed among machine, trades, service, clerical and sales.

Item C-18. What kind of school do you go to now? Where is the college or school you now attend? Do you live at home or at school? Does what you're studying now have anything to do with what you were trained for in high school?

A total of 53 graduates are pursuing some form of postsecondary education. Of the 26 attending college, 14 are attending out of state. It was also found that 62 per cent of the graduates live on campus and 68 per cent are studying courses which were unrelated to their high school training.

RESULTS OF THE MINNESOTA SATISFACTION QUESTIONNAIRE

Table 12 shows scores of two groups of workers on the Minnesota Satisfaction Questionnaire. The two worker groups were designated as general hearing-impaired workers and office clerks. The general hearing-impaired worker group is composed of 1970-75 graduates who completed the MSQ. The office clerks were selected from the normative data given in the Manual for the MSQ (p. 114, 1967). The office clerks most closely characterized the general hearing-impaired workers with the exception of hearing loss. The results indicate that the general hearing-impaired worker is significantly better adjusted and more satisfied with his/her job than the office clerk. It should be noted that other normative groups of workers listed in the manual had scores similar to the office clerks.

TABLE 12

A COMPARISON OF MSQ SCORES FOR EMPLOYED HEARING-IMPAIRED AND REGULAR WORKERS

Group	Number	SD	Mean MSQ Score	t
Hearin- Impaired Workers	127	13.14	81.73	18.18*
Office Clerks	227	12.45	74.48	

*Significant beyond the .01 level.

Evaluation Objective 5. What are the employers' views toward the graduates?

Employer Survey Items 1 through 12 were used to answer Evaluation Objective 5. A total of 92 employers of the hearing-impaired graduates completed the survey.

Item 1. Was he/she properly trained in high school? (a) skillwise, (b) on appropriate equipment and (c) additional training needed.

Of the 92 employers who responded to this item, 90 per cent felt the hearing-impaired graduate had proper skill training, 83 per cent felt they were properly trained on appropriate equipment and 54 per cent reported that additional training was needed.

Item 2. Was the job reengineered?

It was discovered that the work role was reengineered for only six (10 per cent) of the 88 cases reported.

Item 3. What relationship is there between the disability and the job the employe is performing?

Of the 74 employers responding to this item, 80 per cent (59) reported that they did not see any relationship between the disability and the job that the graduate is performing.

Item 4. Has the employe made any advancement? (a) skillwise, (b) job classification and (c) salary.

Ninety-eight per cent of the 85 employers reported that hearing-impaired graduates advanced their skills; only 48 per cent advanced in their classification, and 90 per cent advanced in salary.

Item 5. Success of deaf graduate in comparison to hearing workers.

Table 13 gives results of a t-test analysis of scores on the Minnesota Satisfactoriness Scale, which measures the satisfactoriness of an individual as an employe as perceived by employers of both workers in general and hearing-impaired workers. Workers in general were selected from the data given in the manual for the MSS (p. 49, 1970). The general hearing-impaired workers are employed graduates of 1970-75. The results indicate that there is no significant difference between employers' perceptions of satisfactoriness of workers in general and hearing-impaired workers. Hearing-impaired workers were rated by their employers as being equally successful at their jobs as hearing workers.

TABLE 13

A COMPARISON OF MSS SCORES FOR EMPLOYED HEARING-IMPAIRED AND WORKERS IN GENERAL

Group	Number	SD	Mean MSS Score	t
Hearing-impaired worker	65	10.96	64.4	.89*
Workers-in-general	1,000	5.05	65.75	

*Not significant at the .05 level.

Item 6. Would you consider employing another hearing-impaired/handicapped person?

Of 86 employers answering this item, 95 per cent said that they would consider hiring another hearing-impaired/handicapped person.

Item 7. If the answer to Item 6 was "yes," what kind of job would be considered appropriate for hearing-impaired workers?

A total of 82 employers responded to this item. The results are listed in Table 14 in rank order.

TABLE 14

JOBS RECOMMENDED BY EMPLOYERS

Job	N	Job	N
Any position with limitations	7	Cabinetmaker	1
Any position	6	Typesetter	1
Keypunch operator	5	Printer	1
Sewing machine operator	5	Lino-typist	1
Clerk	5	Lift-truck operator	1
Presser	4	Boys' counselor	1
Repro-typing	4	Artist	1
Assistant cook	4	Examiner packer	1
Woodworking	3	Dorm supervisor	1
Machine operator	3	Lathe operator	1
Collator	2	Machine helper	1
Hair dresser	2	Fashion knitter trainee	1
Terminal operator	2	Assistant electronics technician	1
Barber	2	Food service	1
Housekeeping aide	1	Porter	1
Baker helper	1	Labor	1
Lab technician	1	Welder	1
Child care worker	1	Secretary	1
Janitor	1		

Item 8. If answer is "no" to Item 6, why would you not hire additional handicapped/hearing-impaired workers?

Only five employers gave reasons why they would not hire other deaf workers. Three mentioned communication difficulties; the other two said there were no openings available.

Item 9. Have you had previous experience with the hearing-impaired/handicapped other than this employe?

Only 53 per cent of the 91 employers had some previous experience with the hearing-impaired. Usually this experience came from other hearing-impaired employes and schools for the deaf. Forty-seven per cent of the employers had no experience with the hearing-impaired other than the currently employed hearing-impaired worker.

Item 10. Do you employ other handicapped workers?

Fifty-three of the 89 employers responded to this item. It was found that 60 per cent of the employers of the handicapped hire one to six other impaired workers.

Item 11. How did you find this person for employment?

Of the 85 respondents, 25 employers used the school to locate workers. Others used friends, family, personal application and newspaper ads.

Item 12. Do you feel the hearing-impaired individual has had a problem socially adjusting within the company?

Only nine per cent of the 91 responding employers felt that their deaf employe has trouble socially adjusting within the company. The major steps taken to deal with social problems were employers and coworkers learning to use sign language, counseling, meeting with coworkers, and use of written explanations.

Evaluation Objective 6. What are the parents' views toward their son's/daughter's educational program?

Parent Follow-Up Survey Items 16, 17, 18, 19, 20, 21 and 22 were used to obtain answers to Evaluation Objective 6. A total of 153 parents responded to the survey.

Items 16 and 17. What did you like and dislike about your son's/daughter's secondary educational program?

The most frequent remark, 24 per cent, was that the parents liked the overall school program, including curriculum, vocational training and extracurricular activities. Fifteen per cent said there was nothing they liked about the educational program, and 13 per cent had no comment.

Twenty-three per cent of the parents could think of nothing they disliked about their child's educational program and 12 per cent had no comments. The greatest shortcoming cited was the lack of emphasis on remediation of specific academic weaknesses in math, reading and language. Many parents expressed need for more emphasis on language development, on-the-job training, vocational education, flexible programs, practical living skills and educational programs closer to home.

Item 18. Were you ever informed about the educational or vocational programs available to your son/daughter?

A total of 65 per cent of the parents replied that they had benefited from counseling regarding the educational and vocational programs available to their children. Thirty-five per cent indicated that they had received no counseling services. The sources of educational information fell into four categories: school personnel, 82 per cent; Bureau of Rehabilitation counselors, seven per cent; speech and hearing centers, four per cent; and friends, organizations for the deaf and postsecondary schools, five per cent.

Item 19. Do you feel your son/daughter had enough information for selecting a senior high program in college prep or vocational education?

Approximately one-half of the parents surveyed felt their son/daughter did not receive adequate counseling or information to help him/her select an appropriate college preparatory or vocational program. A significant number of comments were made about the rigidity of programs offered, inappropriateness of the programs, unrealistic goals and limited program selections.

Item 20. Do you feel your son's/daughter's vocational training in senior high was adequate for today's job market?

Parent responses indicated that the majority of the graduates were not adequately trained for today's job market. Approximately 48 per cent expressed a definite need for additional job training to meet the demands of today's job market. Reasons for citing the need for additional training were the lack of adequate vocational preparation, lack of opportunity for advancement, job skills confined to a too limited specialty area, not enough jobs available in the field trained for, incomplete counseling and the inability to keep up with rapidly advancing technology.

A total of 36 per cent of the parents believed the training was adequate for today's job market. Half of these parents based their judgments on their children's success in finding and holding jobs. The remaining half of this group responded "yes" for various reasons, such as adequate vocational training, good on-the-job training, job satisfaction and good earning power.

Item 21. Is your son/daughter now self-supportive?

At the time of the interview, 64 per cent of the graduates were self-suppportive. The 36 per cent not self-supportive gave the following reasons: unemployed, postsecondary students, income too low, poor health, marriage and motherhood.

Item 22. Do you feel there is a need for follow-up services to help your son/daughter advance and obtain a better job?

Twenty per cent of the parents indicated no need for follow-up services, 14 per cent did not respond, and three per cent did not know if there was a need for follow-up assistance. The remaining 63 per cent of the parents indicated a definite need for follow-up services. Specific services requested were: 31 per cent for follow-up services in the form of counseling from BVR and counselors in schools for the deaf, postgraduate training in academic and vocational skills, retraining to maintain skills needed for advancing technology, retraining in new vocational areas to overcome job dissatisfaction and training to advance in one's field.

Job placement services were mentioned as a need by 16 per cent of the parents. Specifically, the parents requested interpreters for job interviews, services for multiply handicapped graduates, employer counseling concerning deafness and communication training for the deaf, their employers and hearing coworkers.

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